

REQUEST FOR RECONSIDERATION

Applicants thank Examiner Harlan for the helpful and courteous discussion of April 19, 2005. During the discussion, Applicants' U.S. representative presented arguments that the prior art relied upon by the Office does not explicitly disclose a surface-treated phosphate glass composition that is surface-treated with a material other than a phosphorous flame-retardant or polymer present in the prior art composition.

Independent Claim 1 has been amended to require that the phosphate glass is a surface-treated phosphate glass. Applicants have disclosed that a surface-treated phosphate glass may provide for improved adhesion between the phosphate glass and the thermoplastic resin of the claims (page 12, lines 2-4). Improved adhesion between the phosphate glass and the thermoplastic resin avoids the appearance of void spaces separating the thermoplastic resin from the glass. The presence of void spaces between the phosphate glass and the thermoplastic resin hinders the melting of the phosphate glass during combustion of the thermoplastic resin and thereby makes it difficult for the flame-retardant properties of the phosphate glass to be realized in the thermoplastic resin composition (page 12, lines 2-17). New dependent Claims 20-22 have been added. The new dependent claims limit the surface treatment of the surface-treated phosphate glass.

Applicants submit that the prior art relied upon by the Office (Carre EP 0643097) does not disclose the surface-treated phosphate glass of the present claims.

The surface-treated phosphate glass of the present claims is prepared by surface treating the phosphate glass with a surface treating agent that is different from the thermoplastic resin and phosphorous flame-retardant recited in the claims.

Carre discloses that the prior art glass may be mixed with the prior art phosphorous-based stabilizer. On page 5, lines 20-25 the following is disclosed:

One method used to incorporate the stabilizer agent into the composite involved coating the phosphate glass particles with

the stabilizer prior to the actual composite processing or formation. For example, in order to form the glass/polymer composite examples disclosed in the preferred embodiment, the glass particles were first coated with the phosphoric acid ester tricresylphosphate (TCP).

Therefore, in the prior art relied upon by the Office the glass particles are premixed with the stabilizer (e.g., a phosphoric acid ester material that may be a phosphorous flame-retardant) prior to mixing (e.g., kneading) with the thermoplastic resin. In Carre the prior art phosphorous flame-retardant is mixed with the phosphate glass prior to kneading with the resin to disperse the stabilizer agent (e.g., phosphorous flame-retardant) in the prior art phosphate glass. Carre mixes the prior art glass with the prior art stabilizer to disperse the stabilizer in the prior art glass/plastic composite.

In contrast, in the claimed invention, the surface-treated phosphate glass is surface treated with a material other than the phosphorous flame-retardant and/or thermoplastic resin of the claims. In the claimed invention, the phosphate glass is surface-treated with a surface treatment agent to improve adhesion between the phosphate glass and the thermoplastic resins and thereby avoid the formation of voids between the phosphate glass and the thermoplastic resin.

Applicants submit the invention of Claim 1 is novel over the prior art relied upon by the Office as evidence by the prior art's silence with regards to surface treating the phosphate glass as presently claimed.

New independent Claim 23 has been added. New independent Claim 23 requires the presence of a phosphate glass containing at least P<sub>2</sub>O<sub>5</sub>, ZnO, a divalent metal oxide other than ZnO, an alkali metal oxide, Al<sub>2</sub>O<sub>3</sub>, B<sub>2</sub>O<sub>3</sub> and SO<sub>3</sub>. Applicants submit that Carre does not disclose a phosphate glass containing SO<sub>3</sub> in an amount of from 3 to 20 mol%.

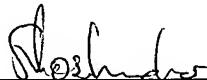
Applicants therefore submit that the subject matter of new independent Claim 23 is novel and not obvious in view of the prior art relied upon by the Office.

New dependent Claims 40-41 have been added. New dependent Claims 40-41 limit the physical form of the phosphate glass present in the invention thermoplastic resin compositions. Applicants submit that the subject matter of new dependent Claims 40-41 is further patentable over the prior art of record in view of the prior art's silence with respect to the physical form of the phosphate glass.

Applicants submit the amendment to the claims places all now-pending claims in condition for allowance. Applicants respectfully request the allowance of the claims.

Respectfully submitted,

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